

Article 17. Environmental Monitoring and Response Programs for Air, Soil, and Soil-Pore Gas for Permitted Facilities



§66264.700. Applicability to Permitted Facilities.

(a) The regulations in this article apply to owners and operators of permitted facilities that treat, store, recycle or dispose of hazardous waste. The owner or operator shall satisfy the requirements of this article for all wastes (or constituents thereof) contained in any regulated unit that receives hazardous waste after February 2, 1985. Any waste or waste constituent migrating beyond the regulated unit, as determined by monitoring at any monitoring point for air or soil-pore gas established in accordance with section 66264.705, is assumed to originate from a regulated unit unless the owner or operator demonstrates to the satisfaction of the Department that such waste or waste constituent originated from another source.

(b) The owner or operator is not subject to regulation under this article if the Department finds, pursuant to section 66264.280(d), that the treatment zone of a land treatment unit does not contain levels of hazardous constituents that are above background levels of those constituents by an amount that is statistically significant, and if an unsaturated zone monitoring program meeting the requirements of section 66264.278 has not shown a statistically significant increase in hazardous constituents below the treatment zone during the active life of the unit. An exemption under this subsection can only relieve an owner or operator of responsibility to meet the requirements of this article during the post-closure care period.

(c) The owner or operator is not subject to regulation under this article if the owner or operator demonstrates to the satisfaction of the Department that hazardous waste will not migrate from a regulated unit during the active life of the unit (including the closure period) and the post-closure care period specified under section 66264.117. The demonstration that liquid will not migrate shall be certified by an independent certified engineering geologist or civil engineer registered in California. The demonstration that gas or airborne solids will not migrate shall be certified by a scientist, or engineer registered in California, qualified to make such a demonstration. In order to provide an adequate margin of safety in the prediction of potential migration of liquid, the owner or operator shall base any predictions made under this subsection on assumptions that maximize the rate of liquid migration.

(d) The regulations under this article apply during the active life of the regulated unit (including the closure period). After closure of the regulated unit, the regulations in this article:

(1) do not apply if all waste, waste residues, contaminated containment system components and contaminated subsoils are removed or decontaminated at closure; or

(2) apply during the post closure care period under section 66264.117 of article 7 of this chapter and during any compliance period under section 66264.96 of article 6 of this chapter.

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 25150(a), 25159, 25159.5 and 25245, Health and Safety Code.

HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).

§66264.701. Required Programs.

(a) Owners and operators subject to this article shall conduct a monitoring and response program as follows.

(1) Whenever there is a statistically significant increase under section 66264.707(b) for any hazardous constituents under section 66264.703 from a regulated unit at any monitoring point under section 66264.705, or at another location at which environmental monitoring is undertaken pursuant to state requirements, the owner or operator shall institute a compliance monitoring program under section 66264.708.

(2) Whenever the environmental protection standard under section 66264.702 is exceeded, or when a concentration specified for soil-pore gas or open-air downwind from the hazardous waste facility, is exceeded, the owner or operator shall institute a corrective action program under section 66264.708.

(3) In all other cases, the owner or operator shall institute a detection monitoring program under section 66264.706.

(b) The Department will specify in the facility permit the specific elements of the monitoring and response program. The Department shall include one or more of the programs identified in subsection (a) of this section in the facility permit as may be necessary to protect human health or the environment and will specify the circumstances under which each of the programs will be required. In deciding whether to require the owner or operator to be prepared to institute a particular program, the Department will consider the potential adverse effects on human health or the environment that might occur before final administrative action could be taken on a permit modification application to incorporate such a program.

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 25150(a), 25159, 25159.5 and 25245, Health and Safety Code.

HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).

§66264.702. Environmental Protection Standard.

(a) The owner or operator shall comply with conditions specified in the facility permit that are designed to ensure that hazardous constituents, under section 66264.703 entering soil or air from a regulated unit, do not exceed the concentration limits under section 66264.704 cited by the Department as maximum acceptable concentrations in

soil, soil-pore gas, air, or on the land surface.

(b) The owner or operator shall not cause the concentration of a hazardous constituent in soil, soil-pore gas or air outside the unit to exceed a concentration limit under section 66264.704 specified in the facility permit as maximum acceptable concentrations in soil, soil-pore gas, air, or on the land surface.

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 25150(a), 25159, 25159.5 and 25245, Health and Safety Code.

HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).

§66264.703. Hazardous Constituents.

(a) The Department will specify in the facility permit the hazardous constituents to which the environmental protection standard of section 66264.702 applies. Constituents specified in the permit will be limited to constituents reasonably expected to be in or derived from waste contained in a regulated unit.

(b) The Department shall not specify in the facility permit constituents the Department considers not capable of posing a substantial present or potential hazard to human health or the environment and that are not useful as an indicator of migration of hazardous waste. In deciding which constituents to cite in the facility permit, the Department will consider the following:

(1) potential effects on human health or the environment that can result from migration of waste constituents from a regulated unit considering:

(A) the volume, physical and chemical characteristics of the waste in the regulated unit, including its potential for migration;

(B) the hydrogeological characteristics of the facility and surrounding land;

(C) the current and estimated future uses of the area;

(D) any existing contamination or pollution, including other sources and their cumulative impact;

(E) the potential for health risks caused by human exposure to waste constituents;

(F) the potential damage to wildlife, crops, vegetation and physical structures caused by exposure to waste constituents; and

(G) the persistence and permanence of the potential adverse effects;

(2) potential adverse effects on surface and groundwater quality; and

(3) capability of the substance to act as an indicator of the possible presence of a hazardous constituent of hazardous waste.

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 25150(a), 25159, 25159.5 and 25245, Health and Safety Code.

HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).

§66264.704. Concentration Limits.

(a) The facility permit shall specify concentration limits for soil, soil-pore gas, and open-air downwind from the regulated unit, for hazardous constituents established under section 66264.703.

(b) The concentration limit for a hazardous constituent in soil outside the regulated unit shall not exceed the background concentration of that constituent in the soil unless an alternate concentration limit that is higher than background concentration for soil is established by the Department under subsection (e) of this section.

(c) The concentration limit for a hazardous constituent in open-air immediately downwind from the regulated unit:

(1) shall not exceed an ambient air quality standard established by the California Air Resources Board; and

(2) shall not exceed a concentration limit for a hazardous constituent established by the Department to protect human health or the environment.

(d) The concentration limit for a hazardous constituent in soil-pore gas outside the regulated unit shall not exceed the background concentration in soil-pore gas unless a concentration limit greater than background is established for soil-pore gas by the Department under subsection (e) of this section.

(e) The Department shall establish an alternate concentration limit for a hazardous constituent if it is found that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded. In establishing alternate concentration limits, the Department will consider any or all of the factors listed under section 66264.703(b).

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 25150(a), 25159, 25159.5 and 25245, Health and Safety Code.

HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).

§66264.705. Monitoring Points.

The Department will specify in the facility permit the monitoring points at which monitoring must be conducted by the owner or operator and at which the environmental protection standard of section 66264.702 applies. Monitoring points shall be suitable for sampling any substance that may have migrated from the regulated

unit, and shall be located close enough to the regulated unit to provide an early indication of contaminant migration.

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 25150(a), 25159, 25159.5 and 25245, Health and Safety Code.

HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).

§66264.706. Detection Monitoring Program.

An owner or operator required to establish a detection monitoring program under this article shall, at a minimum, discharge the responsibilities specified in subsections (a) through (f) of this section concerning monitoring of air and soil-pore gas.

(a) The owner or operator shall assure that monitoring and corrective action measures necessary to achieve compliance with the environmental protection standard under section 66264.702 are taken as specified in the permit or in an order issued by the Department.

(b) The owner or operator of a regulated unit that contains hazardous waste or discarded hazardous material that contains a volatile toxic substance or a hazardous material that can become airborne, or that can decompose or react to form a volatile toxic substance or toxic gas, shall follow methods prescribed by the Department to provide for representative sampling and analysis of air upwind and at the disposal area, and of soil-pore gas at monitoring points under section 66264.705, established by the owner or operator to the satisfaction of the Department. Vapor and gas monitoring wells shall be covered with collection chambers approved by the Department. The owner or operator shall provide, inside the collection chambers, probes or equivalent methodologies that actively sense the concentration of substances specified by the Department. If specified by the Department, the owner or operator shall provide instrumentation that provides continuous recording of concentrations of substances in open air and in the atmosphere of vapor wells.

(c) Samples will be analyzed for those substances specified in the permit. Unless the Department specifies in the permit parameters and constituents for which samples described in subsection (b) of this section shall be analyzed, the owner or operator shall analyze the samples to determine the concentration of all constituents that cause waste at the regulated unit to be hazardous waste. The Department will specify for the regulated unit the location and frequency of monitoring and the type of statistical analysis that will be used. The owner or operator shall submit a report to the Department that indicates the results of the analysis and the concentrations of constituents in the air and soil-pore gas sampled. The report shall be submitted to the Department within 30 days of the date analyses are completed.

(d) If the owner or operator determines that there is an increase of hazardous constituents at any monitoring point under section 66264.705, the owner or operator shall:

(1) notify the Department of this finding in writing within seven days of the date such determination is made. The notification shall indicate what constituents have shown statistically significant increases;

(2) within 90 days of the determination, submit to the Department an application for a permit modification to modify the facility or operating practices at the facility.

(e) If the owner or operator determines that there is an increase of hazardous constituents at any monitoring point under section 66264.705, the owner or operator may demonstrate that a source other than the regulated unit caused the increase or that the increase resulted from an error in sampling, analysis or evaluation. While the owner or operator may make a demonstration under this subsection in addition to, or in lieu of, submitting a permit modification application under subsection (d)(2) of this section, the owner or operator is not relieved of the requirement to submit a permit modification application within the time specified in subsection (d)(2) of this section unless the demonstration made under this subsection shows to the satisfaction of the Department that a source other than the regulated unit caused the increase or that the increase resulted from an error in sampling, analysis or evaluation. In making a demonstration under this subsection, the owner or operator shall:

(1) notify the Department in writing within seven days of determining an increase at any monitoring point that the owner or operator intends to make a determination under this subsection;

(2) within 90 days of determining the increase, submit a report to the Department demonstrating that a source other than the regulated unit caused the increase or that the increase resulted from error in sampling, analysis or evaluation;

(3) within 90 days of determining the increase, submit to the Department an application for a permit modification to make any appropriate changes to the monitoring program at the facility; and

(4) continue to monitor in accordance with the monitoring program established under this section.

(f) If the owner or operator determines that the detection monitoring program under this article does not satisfy the requirements of this section, the owner or operator shall, within 90 days of determining the increase, submit an application for a permit modification to make any appropriate changes to the program.

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 25150(a), 25159, 25159.5 and 25245, Health and Safety Code.

HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).

§66264.707. Compliance Monitoring Program.

An owner or operator required to establish a compliance monitoring program under this article shall, at a

minimum, discharge the following responsibilities.

(a) The owner or operator shall perform monitoring the Department specifies to determine whether regulated units are in compliance with the environmental protection standard under section 66264.702, or to determine the vertical and horizontal extent to which a constituent of hazardous waste has migrated from a regulated unit. The Department will specify the environmental protection standard in the facility permit, including:

- (1) a list of the hazardous constituents identified under section 66264.703;
- (2) concentration limits under section 66264.704 for each of those hazardous constituents; and
- (3) the monitoring points under section 66264.705.

(b) If stipulated by the Department, the owner or operator shall determine the concentration of hazardous constituents in the unsaturated zone or in the air. The owner or operator shall express the concentration at each sampling station in a form necessary for the determination of increases. The owner or operator shall submit data obtained from monitoring to the Department within 30 days after it is obtained.

(c) If the owner or operator determines that the environmental protection standard is being exceeded at any monitoring point established under section 66264.705 or any other type and location of sampling station, the owner or operator shall:

(1) notify the Department of this finding in writing within seven days of the determination. The notification shall indicate what concentration limits have been exceeded;

(2) submit to the Department an application for a permit modification to establish a corrective action program meeting the requirements of section 66264.708 within 180 days of the determination, or within 90 days if an engineering feasibility study has been previously submitted to the Department. The application shall, at a minimum, include the following information:

(A) a detailed description of corrective actions that will achieve compliance with the environmental protection standard specified in the permit under subsection (a) of this section;

(B) a plan for an environmental monitoring program that will demonstrate the effectiveness of the corrective action to the satisfaction of the Department. Such a monitoring program may be based on a compliance monitoring program developed to meet the requirements of this section.

(d) If the owner or operator determines that the environmental protection standard is being exceeded at any monitoring point established under section 66264.705, the owner or operator may demonstrate that a source other than a regulated unit caused the increase or that the increase resulted from error in sampling, analysis or evaluation. While the owner or operator may make a demonstration under this subsection in addition to, or in lieu of, submitting a permit modification application under subsection (c)(2) of this section, the owner or operator is not relieved of the requirement to submit a permit modification application within the time specified in subsection (c)(2) of this section unless the demonstration made under this subsection shows to the satisfaction of the Department that a source other than a regulated unit caused the increase or that the increase resulted from error in sampling, analysis or evaluation. In making a demonstration under this subsection, the owner or operator shall:

(1) notify the Department in writing within seven days of the determination that the owner or operator intends to make a demonstration under this subsection;

(2) within 90 days of the determination, submit a report to the Department which demonstrates that a source other than a regulated unit caused the standard to be exceeded or that the apparent noncompliance with the standard resulted from error in sampling, analysis or evaluation;

(3) within 90 days of the determination, submit to the Department an application for a permit modification to make any appropriate changes to the compliance monitoring program at the facility;

(4) continue to monitor in accord with the compliance monitoring program established under this section.

(e) If the owner or operator determines that the compliance monitoring program does not satisfy the requirements of this section, the owner or operator shall, within 90 days of the determination, submit an application for a permit modification to make any appropriate changes to the program.

(f) The owner or operator shall assure the Department that monitoring and corrective action measures are taken as necessary to achieve compliance with the environmental protection standard under section 66264.702 as specified in the permit or in an order issued by the Department.

(g) When the Department has determined that a constituent of hazardous waste has migrated from a regulated unit, the Department shall require the owner or operator to obtain samples of soil from specified depths and locations, and to chemically analyze such samples as necessary to determine the distances and depths through which constituents of hazardous waste have migrated from the regulated unit.

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 25150(a), 25159, 25159.5 and 25245, Health and Safety Code.

HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).

§66264.708. Corrective Action Program.

An owner or operator required to establish a corrective action program under this article shall, at a minimum, discharge the following responsibilities.

(a) The owner or operator shall take corrective action to ensure that regulated units are in compliance with the environmental protection standard under section 66264.702. The Department will specify the environmental protection standard in the facility permit, including:

- (1) a list of the hazardous constituents identified under section 66264.703;

(2) concentration limits under section 66264.704 for each of those hazardous constituents; and

(3) the monitoring points under section 66264.705.

(b) The owner or operator shall implement a corrective action program that prevents hazardous constituents from exceeding their respective concentration limits at the monitoring points established under section 66264.705 by removing the hazardous waste constituents or treating them in place or providing other effective measures. The permit will specify the specific measures that will be taken.

(c) The owner or operator shall begin corrective action within a reasonable time period after the environmental protection standard is exceeded. The Department will specify that time period in the facility permit. If a facility permit includes a corrective action program under this section in addition to a compliance monitoring program under section 66264.707, the permit will specify when the corrective action will begin, and such a requirement will operate in lieu of section 66264.707(c)(2).

(d) In conjunction with a corrective action program established under this section, the owner or operator shall establish and implement an environmental monitoring program to demonstrate the effectiveness of the corrective action program. Such a monitoring program may be based on the requirements for a compliance monitoring program under section 66264.707 and shall be as effective as that program in determining compliance with the environmental protection standard under section 66264.702 and in determining the success of a corrective action program under subsection (e) of this section.

(e) In addition to the other requirements of this section, the owner or operator shall conduct a corrective action program to remove or treat in place any hazardous constituents under section 66264.703 of this article that have caused, or could cause, the environmental protection standard to be exceeded, or take other action specified by the Department to reduce the concentration of hazardous constituents under section 66264.703 to levels below their respective concentration limits specified pursuant to this chapter, and to prevent subsequent exceedance of those levels by hazardous waste remaining at the regulated unit. The permit will specify the measures to be taken.

(1) Corrective action measures under this subsection shall be initiated and completed within a reasonable period of time considering the extent of contamination.

(2) Corrective action measures under this subsection may be terminated once the concentration of hazardous constituents under section 66264.703 is reduced to levels below their respective concentration limits under section 66264.704, and it is not likely that hazardous waste remaining at the regulated unit will cause a concentration limit under section 66264.704 to be exceeded.

(f) The owner or operator shall continue corrective action measures as necessary to ensure that the environmental protection standard is not exceeded. If the owner or operator is conducting corrective action under this section at the end of the post-closure care period or at the end of any compliance period established under section 66264.96 of article 6, the owner or operator shall continue that corrective action for as long as necessary to achieve compliance with the environmental protection standard under section 66264.702. The owner or operator may terminate corrective action measures under this section taken beyond the end of the post-closure care period or any compliance period established under section 66264.96 of article 6 if the owner or operator demonstrates, to the satisfaction of the Department, based on data from the environmental monitoring program under subsection (d) of this section, that the environmental protection standard of section 66264.702 has not been exceeded during the last three consecutive years.

(g) The owner or operator shall report in writing to the Department on the effectiveness of the corrective action program established under this section. The owner or operator shall submit these reports semiannually.

(h) If the owner or operator determines that the corrective action program does not satisfy the requirements of this section, the owner or operator shall, within 90 days of making such determination, submit an application for a permit modification to make any appropriate changes to the program.

NOTE: Authority cited: Sections 208, 25150 and 25159, Health and Safety Code. Reference: Sections 25150(a), 25159, 25159.5 and 25245, Health and Safety Code.

HISTORY

1. New section filed 5-24-91; operative 7-1-91 (Register 91, No. 22).